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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,693	02/19/2004	Victor Mercado	1842.043US1	4552

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EXAMINER
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LAU, HOI CHING

ART UNIT	PAPER NUMBER
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2612

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/23/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/782,693

Applicant(s)

MERCADO ET AL.

Examiner

Hoi C. Lau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12, 17-21, 23-26 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 17-21, 23-26 and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application.                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1-12, 17-21, 23-26, and 29 have been examined.

***Response to Arguments***

2. Applicant's arguments filed on November 14, 2006 have been fully considered but they are not persuasive. The followings are applicant's arguments:

- a. Stockdale uses only a single sensing mechanism for determining open door status, which does not have a second sensor mechanism operating in conjunction with the first sensor.

- b. Muir does not teach or suggest modifying an existing open door signal using a signal from a different sensor wherein the existing security system and an newly added scrutiny system use the same sensors to detect an open door status.

- c. Muir's retrofitting is designed to solve a different problem from the problem solved by Applicant.

The followings are response to applicant's arguments:

1. Regarding argument (a), (b), (c), the teaching of Muir is relied on implementing a secondary sensor system (e.g. optical sensing) with the primary sensor system (e.g. mechanical sensing) while Stockdale teaches the a inverted optical signal sensing system with door switch. The combination meets the limitation of claim by implements the primary sensor system (e.g. mechanical sensing) as taught by Muir to the door switch of Stockdale which is incorporated

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with the secondary sensing system (e.g. optical sensing system). In the meanwhile, the optical system of the combination is associated as inverted signal detection as taught by Stockdale. As of Muir, multiple sensors are used within the system wherein Standard and optional security is designed so that when the security module is added, it can share the same sensors as noted by Applicant. However, Muir states that the sensing of a main door must be done in both optical and mechanical ways wherein the mechanical sensing would be an existing detection mechanism when implemented with the door switch of Stockdale while an additional sensor would be the optical sensing system of Muir with the inverted signal of Stockdale. The feature of sharing sensors would be a monitoring system for other area of the machine (column 2, lines 8-25). Also see rejection of claim 1.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 8-11, 17-20, 25, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stockdale (U.S. 6,575,833) in view of Muir (U.S. 5,923,249).

Regarding **Claim 1 and 7**, Stockdale teaches a machine comprises:

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a housing (main cabinet 4) (figure 1 and 2 and column 6, lines 17-23);  
a door mounted to the housing for gaining access to the inside of the housing (figure 1 and 2 and column 6, lines 17-23);  
a switch 202 connected to the door and the housing (figure 2);  
a processor 312 for door detection (figure 3 and column 9, lines 62-67), and  
a tamper detection mechanism (security monitoring system 322), wherein the tamper detection mechanism includes:

a tamper detection controller (Sensor Monitoring circuitry 400 and column 10, lines 54-67);

an emitter (figure 4 and column 11, lines 10-20); and

a sensor (figure 4 and column 11, lines 10-20),

wherein one of the emitter and sensor is mounted to the housing and one of the emitter and sensor is mounted to the door (column 7, lines 44-67 and column 8, lines 1-2); and

wherein the tamper detection controller drives the emitter with a signal and monitors the sensor to determine if it generated an inverted version of the signal (figure 4 and column 4, lines 5-11 and column 11, line 67 and column 12, lines 1-12).

It fails to show the switch generates an open door detection signal when the door is open wherein the switch is coupling with tamper detection mechanism and operates in conjunction with the switch to notify the processor that the door was open and generate an alarm.

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Muir shows door monitoring system comprising one or more door open detection devices and first and second monitoring systems each connected to each of the one or more detection devices wherein the main door requires both mechanical and optical detections with their associated processor 104 to monitor if the doors are open (column 1, lines 17-25 and column 2, lines 22-25 and column 3, lines 8-10).

Further, it stated that the mechanical switch would associate with the main door of the machine as an existing door detection mechanism (first monitoring system) while optical and/or mechanical sensor could be a sub-system (second monitoring system) in coupling with mechanical switch for additional tamper detection (column 2, lines 55-67 and column 3, lines 34-35).

It would have been obvious to one of ordinary skill in the art the any conventional switch would generate a signal of some kind at its output as the circuit is completed, for example, open door detection signal for door monitoring switch. Further the detection signal is flowing in the wiring connection throughout the circuitry.

It would have been obvious to one of ordinary skill in the art to modify Stockdale's door switch as part of the tamper detection mechanism and combine with its optical tamper sensing for alarm condition as the combination of mechanical and optical tamper detection wherein the processor is connected to the mechanical switch through wiring connection and sensor interface as taught by Muir because it would provide a additional detection for the system to prevent the theft to hack or vanquish the detection system by using light source to copy and emit the optical sensing element or mechanically overcome the door switch mechanism.

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Further, the sensor (optical) would be obvious to connect to the switch (mechanical), for activating the open door detection signal when an open door is sensed by the sensor because the main door requires both mechanical and optical detections wherein the two detection system is implemented together by at least series or parallel electrical connection.

See Response of argument (1) above.

As to **claim 2**, Stockdale's device meets all the limitation of claim except it fails to show the tamper detection controller is mounted physically separate from the processor.

However, Muir teaches the subsystem includes a micro-controller to control and monitor the sensors which also able communicates with the main controller for existing door detection (figure 1).

It would have been obvious to one of ordinary skill in the art to implement the main controller as the processor recognize the detection of open door while interfacing the micro-controller as the tamper detection controller as claim invention to show separation in part.

See rejection of claim 1 and Response to argument (1) above.

As to **claim 3**, Stockdale teaches the emitter is mounted to a portion of a door interlock mechanism (206 and 202) (column 4, lines 5-11 and column 8, lines 1-2) and wherein the switch 202 is part of the door interlock mechanism (figure 2 and column 7, lines 46-48).

As to **claim 4**, it teaches the sensor is mounted to a portion of a door interlock mechanism (206 and 202) (figure 2 and column 4, lines 5-11 and column 8, lines 1-2)

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and wherein the switch 202 is part of the door interlock mechanism (figure 2 and column 7, lines 46-48).

As to **claim 5**, Stockdale teaches the sensor and emitter operate to generate an inverted signal and wherein the tamper detection controller (322, 400) generates an alarm if the signal received from the sensor is not inverted (figure 3,4,5 and column 4, lines 5-11 and column 11, line 67 and column 12, lines 1-12).

It fails to show the tamper detection controller generates an alarm through its connection to the open door detection signal.

However, the combination of the mechanical and optical detection for door tampering as stated in rejection of claim 1 shows the tamper controller generates an alarm through its connection to the open door detection signal wherein the signal is flew through the wires at different node connection.

As to **claim 8**, Stockdale teaches the emitter is mounted to a portion of the door interlock mechanism (column 7, lines 44-57).

As to **claim 9**, Stockdale teaches the sensor is mounted to a portion of the door interlock mechanism (column 7, lines 44-57).

As to **claim 10**, Stockdale teaches the sensor and emitter operate to generate an inverted signal and wherein the tamper detection controller generates an alarm if the signal received from the sensor is not inverted (figure 4 and column 4, lines 5-11 and column 11, line 67 and column 12, lines 1-12).

As to **claim 11**, Stockdale teaches the tamper detection controller is mounted physically separate from the gaming mechanism (figure 2 and column 8, lines 37-65).



Regarding **claims 17, 20 and 26**, they are claims correspond to the apparatus of claims 1 and 7, and they are therefore rejected for the similar reasons set forth in the rejection of claims 1 and 7, except Claim 20 is claiming the detection system itself.

As to **claim 18**, the combination teaches the existing gaming machine signal is an open door detection signal generated by the existing tamper detection mechanism (column 8, lines 39-65) and as states in rejection of claim 1.

As to **claim 19**, the combination teaches the method comprises generating an alarm if the existing gaming machine signal is not detected ("Stockdale" column 8, lines 39-65 and "Muir" column 3, lines 64-65 and column 4, lines 34-36).

As to **claim 25**, it teaches the object is a door (column 6, lines 17-30).

As to **claim 29**, Stockdale teaches modifying includes inverting the signal (see rejection of claim 1).

4. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stockdale (U.S. 6,575,833) in view of Muir (U.S. 5,923,249), in further view of Droz (U.S. 4,370,644).

As to **claim 6 and 12**, the combination meets all the limitation of claim except it fails to show the tamper detection mechanism includes a relay connected to the open door detection signal wherein the relay operates to activate the open door detection signal when the tamper detection mechanism detects that the door is open.

Droz teaches multiple sensors incorporate with a relay operates to activate/energize the open door detection signal to trigger the alarm when the sensors detects that the door is open (figure 6 and 7 and column 4, lines 50- column 5, lines 25).

It would have been obvious to one of ordinary skill in the art to implement the relay for multiple sensors for door detection as taught by Droz to the optical sensing for tamper detection which incorporates with the mechanical switch as taught by the combination of Stockdale and Muir because it would provide activation of open door detection when either or both, optical and mechanical sensor(s) is/are triggered. Further, it also provides a switching and triggering element to interface different electronic components to corporate as a whole unit.

5. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stockdale (U.S. 6,575,833) in view of Muir (U.S. 5,923,249), in further view of Hama et al. (U.S. 6,239,423).

As to **claim 21**, Stockdale's device meets all the limitation of claim except it fails to show a LED as an indicator, which is used to indicate that the emitter and sensor are aligned properly.

Hama teaches to use light indicator to align the emitter and sensor for positioning (figure 2 and column 7, lines 45-55).

It would have been obvious to one of ordinary skill in the art the use of LED as a light indicator is a well-known method because LED provide the same and alternative light as other light source for alert.

It would have been obvious to one of ordinary skill in the art to include a LED indicator into Stockdale's optical detection system because it would help the user to align and calibrate both emitter and sensor during installation.

6. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stockdale (U.S. 6,575,833) in view of Muir (U.S. 5,923,249), in further view of Carmichael (U.S. 2002/0100659).

As to **claim 23 and 24**, Stockdale's device meets all the limitation of claim except it fails to show the object is peripheral where peripheral is a hopper.

Carmichael's device teaches a kit with emitter and sensor is for detecting a hopper (abstract and page 2, paragraphs 14,16, 33 and 38).

It would have been obvious to one of ordinary skill in the art the detecting object would be peripheral or hopper because it would provide the collectable data such as coin for the system to avoid a cheating tool would be inserted.

#### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoi C. Lau whose telephone number is (571)272-8547. The examiner can normally be reached on M- F 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571)272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hoi C. Lau  
Art Unit 2612



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